

Acronyms
Glossary
List of Preparers

Acronyms

°F degrees Fahrenheit

μg/m3 micrograms per cubic meter AAQS ambient air quality standards

ACEC Area of Critical Environmental Concern
ACHP Advisory Council on Historic Preservation

AHC Anasazi Heritage Center

AHPA Archaeological and Historic Preservation Act

AMP Allotment Management Plan

AMS Analysis of the Management Situation

APD Application for Permit to Drill

APHIS Animal and Plant Health Inspection Service

AQATSD Air Quality Assessment Technical Support Document

AQRV Air Quality Related Value AR Administrative Record

ARPA Archaeological Resources Protection Act of 1979

ATV all-terrain vehicle AUM animal unit month

B/W black/white

BA Biological Assessment

Bbls barrels

BEA Bureau of Economic Analysis
BLM Bureau of Land Management
BMP Best Management Practice

BO Biological Opinion
BOR Bureau of Reclamation

CAA Clean Air Act

CASTnet Clean Air Status and Trends Network CCR Code of Colorado Regulations

CDOW Colorado Division of Wildlife

CDPHE Colorado Department of Public Health and Environment

CDWR Colorado Division of Water Resources

CEDS Comprehensive Economic Development Strategy

CEQ Council on Environmental Quality
CFR Code of Federal Regulations

cfs cubic feet per second

CNHP Colorado Natural Heritage Program

 ${\sf CO}$ carbon monoxide ${\sf CO}_2$ carbon dioxide ${\sf COA}$ condition of approval ${\sf CRM}$ Cultural Resource Monitor

CRMP Cultural Resource Management Plan

CRS Colorado Revised Statute

CSDO Colorado State Demography Office

CSU Controlled Surface Use

CWA Clean Water Act of 1977
DEM Digital Elevation Model

DEIS Draft Environmental Impact Statement
DRMP Draft Resource Management Plan
DWCD Dolores Water Conservancy District

EA Environmental Assessment

EFRP Emergency Fire Rehabilitation Plan
EIS Environmental Impact Statement
EPA Environmental Protection Agency
ERC energy release component

ESA Endangered Species Act of 1973

ESI Ecological Site Inventory

FAR Functional At-Risk

FLAG Federal Land Managers' Air Quality Related Values Workgroup

FLM Federal Land Manager

FLPMA Federal Land Policy and Management Act of 1976

FLTFA Federal Land Transaction Facilitation Act

FMP Fire Management Plan FMZ Fire Management Zone

FOGRMA Federal Oil and Gas Royalty Management Act

FOGRS+FA Federal Oil and Gas Royalty Simplification and Fairness Act of

1996

FONSI Finding of No Significant Impact

FOOGLRA Federal Onshore Oil and Gas Leasing Reform Act of 1987

FRCC Fire Regime Condition Class

GADP Geographic Area Development Plan GIS Geographic Information System

gpm gallons per minute H₂S hydrogen sulfide

HABS Historic American Building Survey

HAP hazardous air pollutant
HMP Habitat Management Plan
HNM Hovenweep National Monument

hp horsepower

HRU Human Resource Unit
HRV historic range of variability
IBLA Interior Board of Land Appeals

IC internal combustion ID interdisciplinary

IMP Integrated Monitoring Plan

IMPROVE Interagency Monitoring of Protected Visual Environments

ISA Instant Study Area

kg/ha-yr kilograms per hectare per year

km kilometer

km² square kilometer KOP key observation point

kV kilovolt

Ib/hr pounds per hour LFM live fuel moistures

LIZ Landowner Initiated Zoning

LN Lease Notice LUP Land Use Plan

MBTA Migratory Bird Treaty Act of 1918

mcf million cubic feet

Mesa Verde Mesa Verde National Park

MIST minimum impact suppression tactics
MLC Montezuma Land Conservancy
MLE maximum likelihood estimation
MMBtu million British thermal units
MOA Memorandum of Agreement
MOU Memorandum of Understanding

mph miles per hour MW megawatt

MVIC Montezuma Valley Irrigation Company

MW megawatts NA not applicable

NAAQS National Ambient Air Quality Standard
NADP National Atmospheric Deposition Program

NAGPRA Native American Graves Protection and Repatriation Act of 1990

NDIS Natural Diversity Information Source NEPA National Environmental Policy Act

NEPDG National Energy Policy Development Group

NF non-functional

NGD No Ground Disturbance

NHPA National Historic Preservation Act of 1966
NLCS National Landscape Conservation System

NOA Notice Of Availability

NOAA National Oceanic and Atmospheric Administration

NOI Notice of Intent NO₂ nitrogen dioxide

NO₃ nitrate

NOx oxides of nitrogen

NPDES National Pollutant Discharge Elimination System

NPS National Park Service
NRC National Research Council

NRCS Natural Resource Conservation Service
NRHP National Register of Historic Places

NSO No Surface Occupancy

 O^3 Ozone

OAHP Office of Archaeology and Historic Preservation

OHC Operation Healthy Communities

OHV off-highway vehicle ORV off-road vehicle

PAC Protected Activity Center

Pb Lead

PCA Potential Conservation Area
PDI Palmer Drought Index

PFC Proper Functioning Condition PGA peak ground acceleration

PL Public Law

PM particulate matter
POD Plan Of Development
ppb parts per billion

PSD prevention of significant deterioration
RAWS Remote Automatic Weather System
RFD Reasonable, Foreseeable Development

parts per million

RMP Resource Management Plan RMZ Recreation Management Zone

RNA Resource Natural Area
ROD Record of Decision

ROS Recreational Opportunity Spectrum

ROW right-of-way

ppm

R&PP Recreation and Public Purposes

SAR search and rescue

SHPO State Historic Preservation Office

SIL Significant Impact Level

SJMA San Juan Mountain Association

SJPL San Juan Public Lands SJRA San Juan Recreation Area

 SO_2 sulfur dioxide SO_4 sulfate

SOP Standard Operating Practice SQRU Scenic Quality Rating Unit

SRDT Solar Radiation, Delta Temperature
SRMA Special Recreation Management Area

SRP Special Recreation Permit
SSR Site Specific Relocation
SWWF Southwest willow flycatcher

tcf trillion cubic feet

TDR transfer of development rights

TES threatened, endangered, or sensitive, or other special status

TL timing limitation

TMDL total maximum daily load

tpy tons per year

UNESCO United Nations Educational, Scientific and Cultural Organization

USAF United States Air Force USC United States Code

USDA United States Department of Agriculture USDOI United States Department of the Interior

USFS United States Forest Service

USFWS United States Fish and Wildlife Service

USGS United States Geological Survey
USMS United States Marshall Service
UTM Universal Transverse Mercator
VOC volatile organic compound
VRM visual resource management

WAPA Western Area Power Administration WQCC Water Quality Control Commission

WQCD Water Quality Control Division of CDPHE

WSA Wilderness Study Area
WSI water source inventory
WSR Wild and Scenic River
WSRA Wild and Scenic Rivers Act
WUI wildland-urban interface

GLOSSARY

- **Administrative roads.** Roads restricted from general public use. These roads are used for administration of oil and gas facilities, livestock grazing structures, research areas, and other such administrative uses. They are generally open for public travel by horseback or hiking (foot).
- Allotment Management Plan (AMP). A concisely written program of livestock grazing management, including supportive measures, if required, designed to attain specific management goals in a grazing allotment. An AMP is prepared in consultation with the permittee(s), lessee(s), and other affected interests. Livestock grazing is considered in relation to other uses of the range and to renewable resources, such as watershed, vegetation, and wildlife. An AMP establishes seasons of use, the number of livestock to be permitted, the range improvements needed, and the grazing system.
- Allotment. An area of land in which one or more livestock operators graze their livestock.

 Allotments generally consist of BLM lands but may also include other federally managed, state owned, and private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.
- Analysis of the Management Situation (AMS). Assessment of the current management direction. It includes a consolidation of existing data needed to analyze and resolve identified issues, a description of current BLM management guidance, and a discussion of existing problems and opportunities for solving them.
- Area of Critical Environmental Concern (ACEC). An area within public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards (from H-6310-1, Wilderness Inventory and Study Procedures).
- **Animal Unit Month (AUM).** The amount of forage needed by an "animal unit" (AU) grazing for one month. The animal unit in turn is defined as one mature 1,000-pound cow and her suckling calf.
- **Backcountry Byways.** Vehicle routes that traverse scenic corridors utilizing secondary or backcountry road systems. National backcountry byways are designated by the type of road and vehicle needed to travel the byway.
- **Big Game.** Indigenous ungulate wildlife species that are hunted, such as elk, deer, bison, bighorn sheep, and pronghorn antelope.
- Candidate species. Taxa for which the USFWS has sufficient information on their status and threats to support proposing the species for listing as endangered or threatened under the ESA but for which issuance of a proposed rule is currently precluded by higher priority listing actions. Separate lists for plants, vertebrate animals, and invertebrate animals are published periodically in the Federal Register (from M6840, Special Status Species Manual) (from M6840, Special Status Species Manual).
- **Carrying capacity.** The maximum population or level of activity that can be supported without degradation of the habitat or the population.

- Clean Air Act of 1963 (CAA) and Amendments. Federal legislation governing air pollution control.
- **Closed.** Generally denotes that an area is not available for a particular use or uses; refer to specific definitions found in law, regulations, or policy guidance for application to individual programs. For example, 43 CFR 8340.0-5 sets forth the specific meaning of "closed" as it relates to off highway vehicle use, and 43 CFR 8364 defines "closed" as it relates to closure and restriction orders (from H-1601-1, BLM Land Use Planning Handbook).
- **Condition of Approval (COA).** A condition or provision (requirement) under which an Application for a Permit to Drill or a Sundry Notice is approved.
- Council on Environmental Quality (CEQ). An advisory council to the President of the United States established by the National Environmental Policy Act of 1969. It reviews Federal programs to analyze and interpret environmental trends and information.
- Cross-Country travel. Travel between designated roads.
- **Critical Habitat.** An area occupied by a threatened or endangered species "on which are found those physical and biological features (1) essential to the conservation of the species, and (2) which may require special management considerations or protection."
- **Crucial winter range.** That part of the overall range where 90 percent of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site-specific period of winter as defined for each Colorado Division of Wildlife Data analysis unit.
- **Designated roads.** Specific roads identified by the BLM (or other agencies) where some type of motorized vehicle use is appropriate and allowed either seasonally or yearlong (H-1601-1, BLM Land Use Planning Handbook).
- **Disposal.** Transfer of public land out of Federal ownership to another party through sale, exchange, or land law statutes.
- **Easement.** A right afforded a person or agency to make limited use of another's real property for access or other purposes.
- **Eligibility.** Qualification of a river for inclusion into the National Wild and Scenic Rivers System through the determination (professional judgment) that it is free-flowing and, with its adjacent land area, possesses at least one river-related value considered to be outstandingly remarkable (from M-8351, BLM WSR Policy and Program).
- **Endangered Species.** Any species, which is in danger of extinction throughout all, or a significant portion of its range (from M6840, Special Status Species Manual).
- **Environmental Impact Statement (EIS).** A detailed statement prepared by the responsible official in which a major Federal action which significantly affects the quality of the human environment is described, alternatives to the proposed action provided, and effects analyzed (from BLM National Management Strategy for OHV Use on Public Lands).
- **Extensive Recreation Management Area (ERMA).** Areas in which significant recreation opportunities and problems are limited and explicit recreation management is not required. Minimal management actions related to the Bureau's stewardship responsibilities are adequate in these areas.

- Federal Land Policy and Management Act of 1976 (FLPMA). Public Law 94-579, October 21, 1976, often referred to as the BLM's "Organic Act," which provides the majority of the BLM's legislated authority, direction policy and basic management guidance (from BLM National Management Strategy for OHV Use on Public Lands).
- Fire Regime Condition Class (FRCC). Fire Regime Condition Classes are a measure describing the degree of departure from historical fire regimes, possibly resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. One or more of the following activities may have caused this departure: fire suppression, timber harvesting, livestock grazing, introduction and establishment of exotic plant species, introduced insects or disease, or other management activities.
- **Fire Suppression.** All work activities connected with fire extinguishing operations, beginning with discovery of a fire and continuing until the fire is completely out.
- Fluid Minerals. Oil, gas, coal bed natural gas, carbon dioxide, and geothermal resources.
- **Functioning at Risk.** (1) Condition in which vegetation and soil are susceptible to losing their ability to sustain naturally functioning biotic communities. Human activities, past or present, may increase the risks. (2) Uplands or riparian-wetland areas that are properly functioning, but a soil, water, or vegetation attribute makes them susceptible to degradation and lessens their ability to sustain natural biotic communities. Uplands are particularly at risk if their soils are susceptible to degradation. Human activities, past or present, may increase the risks (from H-4180-1, BLM Rangeland Health Standards Manual).
- **Grazing Preference.** The total number of AUMs on public land apportioned and attached to base property owned or controlled by a lessee.
- **Habitat.** An environment, which meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.
- **Intermittent Stream.** An intermittent stream is a flowing system under normal weather conditions. During the dry season and throughout minor drought periods, these streams will not exhibit flow. Geomorphological characteristics are not well defined and are often inconspicuous. In the absence of external limiting factors (pollution, thermal modifications, etc.), biology is scarce and adapted to the wet and dry conditions of the fluctuating water level.
- Land Tenure adjustments. Ownership or jurisdictional changes are referred as "Land Tenure Adjustments". To improve the manageability of the BLM lands and improve their usefulness to the public, BLM has numerous authorities for "repositioning" lands into a more consolidated pattern, disposing of lands, and entering into cooperative management agreements. These land pattern improvements are completed primarily through the use of land exchanges, but also through land sales, jurisdictional transfers to other agencies, and through the use of cooperative management agreements and leases.
- Land Use Plan (LUP). A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed.

The term includes both RMPs and MFPs. (from H-1601-1, BLM Land Use Planning Handbook).

- Lease. Section 302 of the Federal Land Policy and Management Act of 1976 (FLPMA) provides the BLM's authority to issue leases for the use, occupancy, and development of the public lands. Leases are issued for purposes such as a commercial filming, advertising displays, commercial or noncommercial croplands, apiaries, livestock holding or feeding areas not related to grazing permits and leases, harvesting of native or introduced species, temporary or permanent facilities for commercial purposes (does not include mining claims), residential occupancy, ski resorts, construction equipment storage sites, assembly yards, oil rig stacking sites, mining claim occupancy if the residential structures are not incidental to the mining operation, and water pipelines and well pumps related to irrigation and non-irrigation facilities. The regulations establishing procedures for the processing of these leases and permits are found in 43 Code of Federal Regulations (CFR) 2920.
- **Limited.** Designated areas and trails where the use of off-road vehicles is subject to restrictions, such as limiting the number or types or vehicles allowed, dates and times of use (seasonal restrictions), limiting use to existing roads and trails, or limiting use to designated roads and trails. Under the designated roads and trails designation, use would be allowed only on roads and trails that are signed for use. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year (from BLM National Management Strategy for OHV Use on Public Lands).
- **Locatable Minerals.** Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.
- **Mechanized travel.** Travel using self-propelled bicycles. This is sometimes included in the definition of "non-motorized" but making the distinction is often important.
- **Mineral.** Any naturally formed inorganic material, solid or fluid inorganic substance that can be extracted from the earth, any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained for man's use, usually from the ground. Under Federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).
- **Mineral Estate.** The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.
- **Mineral Materials.** Materials such as sand and gravel and common varieties of stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws, but that can be acquired under the Materials Act of 1947, as amended.
- **Mining Claim.** A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. A mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, millsite, and tunnel site.
- **Motorized travel.** Travel that uses some form of motorized vehicles, including dirt bikes (i.e., motorcycles), OHV (i.e., ATVs), and/or four-wheel and two-wheel drive full-size vehicles.

- Multiple use. The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output (FLPMA) (from M6840, Special Status Species Manual).
- National Wild and Scenic Rivers System. A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams: (1) recreation—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, (2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and (3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted.
- Nonfunctioning Condition. (1) Condition in which vegetation and ground cover are not maintaining soil conditions that can sustain natural biotic communities. (2) Riparian-wetland areas are considered to be in nonfunctioning condition when they do not provide adequate vegetation, landform, or large woody debris to dissipate stream energy associated with high flows and thus are not reducing erosion, improving water quality, or other normal characteristics of riparian areas. The absence of a floodplain may be an indicator of nonfunctioning condition. (See also Properly Functioning Condition and Functioning at Risk [from H-4180-1, BLM Rangeland Health Standards Manual]).
- **Non-motorized travel.** Travel not using a form of machinery, such as foot (hiking) or horseback riding.
- Off-Highway Vehicle (OHV). Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) any non amphibious registered motorboat: (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used for national defense (H-1601-1, BLM Land Use Planning Handbook).
- Off-road. Is defined as cross-country travel between designated roads.
- **Open.** Areas where both cross-country and designated road travel is allowed by all types of vehicles, at all times, anywhere in the area, subject to the operating regulations and vehicle standards set forth in subparts 43 CFR 8341 and 8342. There are no "open areas" within the Monument.

- Outstandingly Remarkable Value (ORV). A value among those listed in Section 1(b) of the Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values..." Other similar values, which may be considered, include ecological, biological or botanical, paleontological, hydrological, scientific or research values (from M-8351, BLM WSR Policy and Program).
- **Ozone.** A faint blue gas produced in the atmosphere from chemical reactions of such sources as burning coal, gasoline and other fuels, and chemicals found in products including solvents, paints, hairsprays, etc.
- **Perennial Stream.** Perennial streams carry flowing water continuously throughout the year, regardless of weather conditions. It exhibits well-defined geomorphological characteristics and in the absence of pollution, thermal modifications, or other manmade disturbances has the ability to support aquatic life. During hydrological drought conditions, the flow may be impaired.
- **Permitted Use.** The forage allocated by, or under the guidance of, an applicable land use plan for livestock grazing in an allotment under a permit or lease, and is expressed in Animal Unit Months (AUMs) (43 CFR § 4100.0-5) (from H-4180-1, BLM Rangeland Health Standards Manual).
- **Prevention of Significant Deterioration (PSD).** An air pollution-permitting program intended to ensure that air quality does not diminish in attainment areas.
- Primitive and Unconfined Recreation. Non-motorized, non-mechanized (except as provided by law), and undeveloped types of recreational activities. Bicycles are considered mechanical transport (from H-6310-1, Wilderness Inventory and Study Procedures).
- Proper Functioning Condition (PFC). (1) An element of the Fundamental of Rangeland Health for watersheds, and therefore a required element of State or regional standards and guidelines under 43 CFR § 4180.2(b). (2) Condition in which vegetation and ground cover maintain soil conditions that can sustain natural biotic communities. For riparian areas, the process of determining function is described in the BLM Technical Reference TR 1737-9. (3) Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize stream banks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is influenced by geomorphic features, soil, water, and vegetation. (4) Uplands function properly when the existing vegetation and ground cover maintain soil conditions capable of sustaining natural biotic communities. The functioning condition of uplands is influenced by geomorphic features, soil, water, and vegetation.
- **Public land.** Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM without regard to how the United States acquired ownership, except lands located on the Outer Continental Shelf, and land held for the benefit of Indians, Aleuts, and Eskimos (H-1601-1, BLM Land Use Planning Handbook).

- **Public roads.** These roads are open to the public, but may be restricted in terms of the type of travel allowed. For example, there are motorized and non-motorized public roads.
- Reasonable Foreseeable Development (RFD) Scenario. The prediction of the type and amount of oil and gas activity that would occur in a given area. The prediction is based on geologic factors, past history of drilling, projected demand for oil and gas, and industry interest.
- Recreation and Public Purposes (R&PP) Act (of 1926). The Recreation and Public Purposes Act provided for the lease and sale of public lands determined valuable for public purposes. The objective of the R&PP Act is to meet the needs of State and local government agencies and non-profit organizations by leasing or conveying public land required for recreation and public purpose uses. Examples of uses made of R&PP lands are parks and greenbelts, sanitary landfills, schools, religious facilities, and camps for youth groups. The act provides substantial cost-benefits for land acquisition and provides for recreation facilities or historical monuments at no cost.
- Recreation Opportunity Spectrum (ROS). A continuum used to characterize recreation opportunities in terms of setting, activity, and experience opportunities. The spectrum covers a range of recreation opportunities from primitive to urban. With respect to river management planning, ROS represents one possible method for delineating management units or zones. See BLM Manual Section 8320 for more detailed discussion (from M-8351, BLM WSR Policy and Program).
- **Recreational River.** Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.
- **Resource Management Plan (RMP).** A land use plan as prescribed by the Federal Land Policy and Management Act that establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives, and actions to be achieved.
- **Right-of-Way (ROW).** Means the public lands authorized to be used or occupied for specific purposes pursuant to a right-of-way grant, which are in the public interest and which require rights-of-way over, upon, under, or through such lands.
- **Riparian Area.** A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.
- **Road**. An open way for the passage of vehicles, persons, or animals on land, regardless of the type of travel.
- **Rock Art.** Petroglyphs (carvings) or pictographs (paintings) used to depict history and culture.
- **Rotation.** Grazing rotation between pastures in the allotment for the permitted time.
- **Scenic Byways.** Highway routes, which have roadsides or corridors of special aesthetic, cultural, or historic value. An essential part of the highway is its scenic corridor. The

- corridor may contain outstanding scenic vistas, unusual geologic features, or other natural elements.
- **Scenic River.** A river or section of a river that is free of impoundments and whose shorelines are largely undeveloped but accessible in places by roads.
- **Season of Use.** The time during which livestock grazing is permitted on a given range allotment, as specified in the grazing permit.
- **Special Recreation Management Area (SRMA).** A public lands unit identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific, structured recreation opportunities (i.e., activity, experience, and benefit opportunities). The BLM recognizes three distinct types of SRMAs: community-based, intensive, and undeveloped big open (H-1601-1, BLM Land Use Planning Handbook).
- **Special Recreation Permit (SRP).** A permit required for any activity that is recreational in nature and involves groups of people. A commercial SRP is required for such an activity that involves a business. Generally, these permits are for guided recreation activities provided by outfitters to the public. These include guided river trips, hunting trips, and jeep tours. However, other commercial recreational activities such as advertising or selling food or merchandise would also require an SRP.

A competitive SRP is required for events where two or more people compete in a recreational activity. A permit is also required when one person or team competes with an established record. However, not all competitive events require a permit.

Certain organized group events also require an SRP. An organized group event is a recreation event that is not commercial and is not competitive. Examples of organized group events include scout campouts, club rides or hikes, church or company picnics, or large family reunions.

- **Stand.** A group of forest trees of sufficiently uniform species composition, age, and condition to be considered a homogeneous unit for management purposes.
- **Sustained Yield.** Sustained yield of wood fiber that, properly harvested and mitigated, would sustain the underlying ecosystem processes.
- **Threatened Species.** Any species, which is likely to become an endangered species within the foreseeable future throughout all, or a significant portion of its range (from M6840, Special Status Species Manual).
- **Total Maximum Daily Load (TMDL).** An estimate of the total quantity of pollutants (from all sources: point, nonpoint, and natural) that may be allowed into waters without exceeding applicable water quality criteria.
- Undertaking. A term with legal definition and application i.e., "actions carried out by or on behalf of the agency; those carried out with Federal financial assistance; those requiring a Federal permit, license, or approval; and those subject to State or local regulation administered pursuant to a delegation or approval by a federal agency." (See National Historic Preservation Act, Section 106 and Section 301(7), Appendix 5; 36 CFR Part 800). However, Section 106 does not apply to actions subject to State or local regulation only. The vast majority of land use authorizations approved by BLM, as well as BLM-funded projects, are undertakings for purposes of Section 106 of the NHPA.
- **Valid Existing Rights.** Any lease established (and valid) prior to a new authorization, change in land designation, or in regulation.

- **Visibility.** A measurement of the ability to see and identify objects at different distances.
- **Visitor Day.** Twelve visitor hours, which may be aggregated by one or more persons in single or multiple visits.
- **Visitor Use.** Visitor use of a resource for inspiration, stimulation, solitude, relaxation, education, pleasure, or satisfaction.
- **Visual Resources.** The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.
- Visual Resource Management (VRM). The system by which BLM classifies and manages scenic values and visual quality of public lands. The system is based on research that has produced ways of assessing aesthetic qualities of the landscape in objective terms. After inventory and evaluation, lands are given relative visual ratings, which determine the amount of modification allowed for the basic elements of the landscape.
- **Visual Resource Management (VRM) Classes.** Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective, which prescribes the amount of change allowed in the characteristic landscape (H-1601-1, BLM Land Use Planning Handbook).
- **Volatile Organic Compounds (VOCs).** Volatile organic chemicals that produce vapors readily, at room temperature and normal atmospheric pressure. Volatile organic chemicals include gasoline, industrial chemicals such as benzene, solvents such as toluene and xylene, and tetrachloroethylene (perchloroethylene, the principal dry cleaning solvent).
- **Wild River.** Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- Wild, Scenic, and/or Recreational (WSR). The term used in this Manual Section for what is traditionally shortened to "Wild and Scenic" rivers. Designated river segments are classified, i.e., wild, scenic, and/or recreational, but cannot overlap (from M-8351, BLM WSR Policy and Program).
- Wilderness Characteristics. Wilderness characteristics include size, the appearance of naturalness, outstanding opportunities for solitude, or a primitive and unconfined type of recreation. They may also include ecological, geological, or other features of scientific, educational, scenic, or historical value. However Section 2(c) of the Wilderness Act of 1964 has been updated by IM-2003-195, dated June 20, 2003. Indicators of an area's naturalness include the extent of landscape modifications, the presence of native vegetation communities, and the connectivity of habitats. Outstanding opportunities for solitude or primitive and unconfined types of recreation may be experienced when the sights, sounds, and evidence of other people are rare or infrequent, in locations where visitors can be isolated, alone or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or only minimally developed recreation facilities are encountered.
- **Wilderness Study Area (WSA).** A designation made through the land use planning process of a roadless area found to have wilderness characteristics as described in Section 2(c) of the Wilderness Act of 1964 (from H-6310-1, Wilderness Inventory and Study Procedures).

Wilderness. A congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value. The definition contained in Section 2(c) of the Wilderness Act of 1964 (78 Stat. 891) (from H-6310-1, Wilderness Inventory and Study Procedures).

Wildfire. Unplanned human or naturally caused fires in wildlands.

Wildland fire. Any fire, regardless of ignition source, that is burning outside of a prescribed fire and any fire burning on public lands or threatening public land resources, where no fire prescription standards have been prepared (from H-1742-1, BLM Emergency Fire Rehabilitation Handbook).

List of Preparers

Contributors

Canyons of the Ancients Advisory Committee			
Name	Category of Interest		
Glenn (Kelly) Wilson	Montezuma County Commission		
Duane Gerren (5/28/03 - 9/20/04) Clifton J. Bankston (4/26/06 – present)	Dolores County Commission		
Tito Naranjo (5/28/03 – 2/7/05)	Tribal		
Selwyn Whiteskunk (5/28/03 – 10/6/05)	Tribal		
William Lipe	Cultural Resources-Regional		
Mark Varien	Cultural Resources-Local		
Chris Majors	Livestock Grazing Permittee		
Robert Clayton	Fluid Mineral Development		
Elizabeth Tozer	Private Landowner		
Charles McAfee	Public-at-large		
Howard Poe	Public-at-large		

Preparers

Monument Manager

LouAnn Jacobson
Canyons of the Ancients National Monument
27501 Highway 184
Dolores, Colorado 81323

BLM Project Manager:

Heather Musclow
Canyons of the Ancients National Monument
27501 Highway 184
Dolores, Colorado 81323

Primary Contractor to BLM:

Ecology and Environment, Inc. (E&E) 4888 Pearl East Circle, Suite 108 Boulder, Colorado 80301

Technical Subcontractors to E&E

Alpine Archaeological Consultants, Inc – Cultural Resources

Ecosphere Environmental Services- various

Uncompangre Paleo - Paleontology

Dunmire Consulting - Social, Economic

Technical Editing Contractor to BLM:

Kristina L. Woodall Irving Burton Associates (IBA) 12101 E. 2nd Avenue, Suite 201C Aurora, Colorado 80011

The following BLM individuals contributed to this document:

Name	Resource	Organization	
Mark Applequist	GIS	Dolores Public Lands Office and Canyons of the Ancients	
Victoria Atkins	Education and Interpretation	Canyons of the Ancients	
David Baker	Special Designation Areas	San Juan Public Lands Center	
Roger Baker	Weed Management	Dolores Public Lands Office and Canyons of the Ancients	
Logan Briscoe	Public Safety and Law Enforcement	Canyons of the Ancients	
Allen Farnsworth	Fuels and Fire	San Juan Public Lands Center	
Linda Farnsworth	Archaeology	Canyons of the Ancients	
Dan Greene	GIS Specialist	San Juan Public Lands Center	
Ken Hehr	Forestry and Woodland Products	Dolores Public Lands Office and Canyons of the Ancients	
Michael Jensen	Rangeland Resources	Dolores Public Lands Office and Canyons of the Ancients	
Shauna Jensen	Water	Dolores Public Lands Office and Canyons of the Ancients	
Clyde Johnson	Lands and Realty	San Juan Public Lands Center	
Helen Mary Johnson	Fluid and Solid Minerals	San Juan Public Lands Center	
Kevin Joseph	Fuels and Fire	Dolores Public Lands Office and Canyons of the Ancients	
Christiann Kantner	Graphics	Anasazi Heritage Center	
Philip Kemp	Forestry and Woodland Products	Dolores Public Lands Office and Canyons of the Ancients	
Steve Kendall	Planning	Canyons of the Ancients	
Laura Kochanski	Archaeologist	Canyons of the Ancients	
Keith McGrath	Public Safety and Law Enforcement	San Juan Public Lands Center	

Name	Resource	Organization	
Kathleen Nickell	Wildlife	Dolores Public Lands Office and Canyons of the Ancients	
Stephanie Odell	Hazardous Materials	San Juan Public Lands Center	
Kelly Palmer	Air and Water	San Juan Public Lands Center	
Daniel Rabinowitz	Fluid Minerals	San Juan Public Lands Center	
Kim Round	Visual Quality	San Juan Public Lands Center	
Richard Ryan	Recreation	Dolores Public Lands Office and Canyons of the Ancients	
Leslie Stewart	Ecology	Dolores Public Lands Office and Canyons of the Ancients	
Loren Wickstrom	Solid Minerals	San Juan Public Lands Center	
Penny Wu	Recreation	Dolores Public Lands Office and Canyons of the Ancients	

The following Ecology and Environment, Inc. individuals contributed to this document:

Name	Discipline	Qualifications and Experience	Area of Participation
Jerry Barker	Range Ecology	Ph.D., 26 years	Fuels and Fire, Vegetation Resources, Rangeland Management, Forestry
Lauren Barringer	Biology	B.S., 2 years	Wildlife, Administrative Record
Courtney Dohoney	Environmental Management	M.E.M., 1 year	Special Designations
Carolyn Dunmire	Natural Resource Economy and Planning	M.S., 18 years	Social and Economic
Cameron Fisher	Fisheries Biology	M.S., 9 years	Special Designations Water Resources;
George Greenwood	Fire Ecology	B.S., MBA,	Fuels and Fire
Fred Groth	Remote Sensing	M.S., 12 years	GIS, Visual Resources
Michelle Hanson	Geology	B.S., 16 years	Technical Editing
Cary Hudson	Environmental and Petroleum Engineering	M.S., 17 years	Mineral and Energy Resources

Name	Discipline	Qualifications and Experience	Area of Participation
Ashley LaForge	Water and Air Resources	M.E.M., 8 years	Water Resources
Blythe Mackey	Ecology	B.A., 3 years	Special Designations
Carron Meaney	Wildlife Ecology	Ph.D., 29 years	Wildlife and Fisheries (including sensitive species) Management
Maureen O'Shea- Stone	Plant Ecology	M.A., 20 years	Project Manager, ACECs, Sensitive Species, Rangeland Management, Vegetation Resources, Forestry, Noxious Weed Management
William Richards	Environmental Management	B.S., 21 years	Transportation
Richard Rudy	Geology	M.A., P.G., C.P.G., 26 years	Principal in Charge
Susan Scherner	Landscape Ecology	M.L.A., 20 years	Visual Resources
Susan Serreze	Geology	M.A., 21 years	Geology and Soil Resources, Administrative Record
Maria Viana	Data Management	B.S., 6 years	Website Hosting and Management
Joe Tessitore, P.E.	Air Quality	M.S., 47 years	Climate and Air Quality
James Walsh	Geology and Soils	M.A., C.P.S.S., 30 years	Soil Resources
E&E Technical Subcontractors			
Susan Chandler Alpine Archaeological Consultants, Inc	Cultural Resources	M.A., 30 years	Cultural Resources
Ted Hoefer III RMC Consultants	Archaeology and Historic Preservation	M.A., 23 years	Cultural Resources
Rodney Scheetz Uncompahgre Paleo	Paleontology	Ph.D., 10 years	Paleontological Resources
Kim Redmond Alpine Archaeological Consultants, Inc	Cultural Resources	M.A., 17 years	Cultural Resources